Docket No.:
Applicant:
Serial No.:
10/811,738
Filing Date:

AUG 1 0 2007

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PROVIDE A S

REPLACEMENT

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e 727°

PROVIDE A SILICON SUBSTRATE LAYER 610

START

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DEPOSIT GERMANIUM TO FORM A SILICON GERMANIUM FILM 710

1330

PERFORM A RAPID THERMAL OXIDATION (RTO)
PROCESS TO CREATE A LAYER OF THERMAL OXIDE
810 OVER THE SILICON GERMANIUM FILM 710

_/ 1340

MEASURE THE THICKNESS OF THE LAYER OF THERMAL OXIDE 810 IN REAL TIME USING ELLIPSOMETER 900

- 1350

CORRELATE THE MEASURED THICKNESS OF THE LAYER OF THERMAL OXIDE 810 TO A GERMANIUM CONCENTRATION OF THE SILICON GERMANIUM FILM 710 IN REAL TIME USING AN APPROXIMATELY LINEAR CORRELATION

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OBTAIN A VALUE OF THE GERMANIUM CONCENTRATION OF THE SILICON GERMANIUM FILM 710 IN REAL TIME

1370

CONTINUE

FIG. 13

CONTROL THE MANUFACTURE
OF THE SILICON GERMANIUM
FILM 710 IN REAL TIME
USING THE VALUE OF
THE GERMANIUM CONCENTRATION